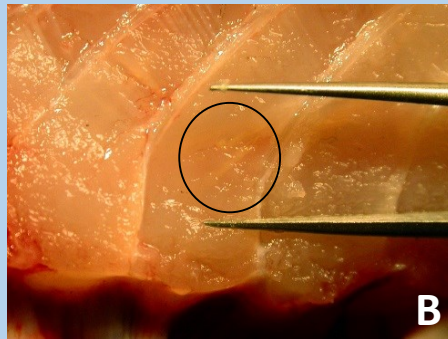
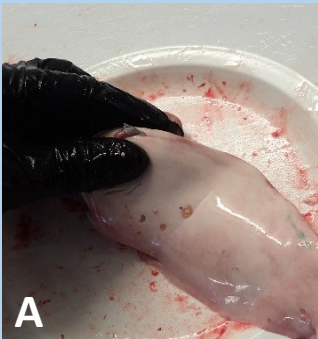


# Parasitic nematodes in cod

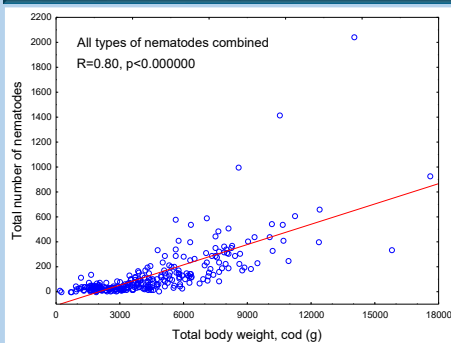
- **Parasitic nematodes** commonly occur in most commercially harvested marine fish species.
- In cod, the most important types of nematodes are *Anisakis*, also known as the **herring-** or **whale worm**, and *Pseudoterranova*, commonly called **cod-** or **seal worm**.
- As the names indicate, the two worms use whales and seals as definitive host, respectively.
- Practically all cod (100%) appear to be infected with nematodes, often carrying several types.
- **Whale worms** are small, usually spiral shaped and very hard to detect in the flesh of fish.
- **Seal worms** are larger, often brownish, and, thus, easily spotted in the flesh or liver of cod.



**A:** Whale- and seal worms on the liver of cod («skrei»). **B:** Whale worm in the flesh of saithe – very hard to spot. **C:** Several seal worms in the flesh of white fish.

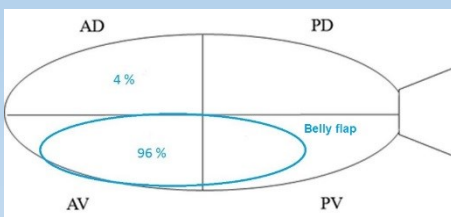
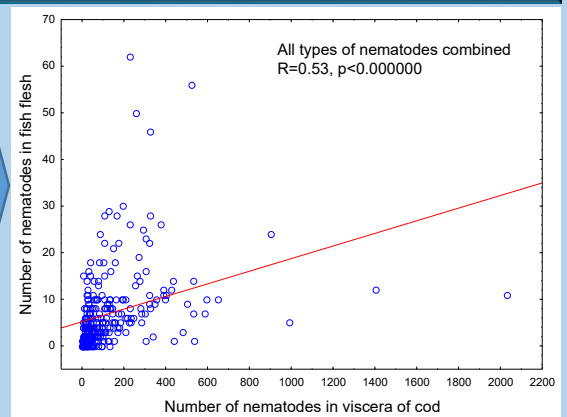
## General trend:

The number of worms on the visceral organs is positively correlated with the number of worms in the fish flesh. However, the relation strongly depends on fishing area (presence of seals?) and individual fish host size.



Clear relationship between body weight and total no. of worms in cod

Lots of worms in the visceral cavity usually implies that there are many worms in the fish flesh, as well.



Typical distribution of whale worms in the flesh of migrating cod («Skrei»)

## Where do they go in the fish flesh?

Coastal cod: May show many **seal worms** across all parts of the fillets.

«Skrei»: Only a few seal worms occur in the flesh. Nearly all whale worms lodge in the belly flaps → **trimming the fillets may strongly reduce the no. of whale worms in the final product!**